



Arch Chemicals, Inc.

MATERIAL SAFETY DATA

FOR ANY EMERGENCY, CALL 24 HOURS/7 DAYS:	1-800-654-6911
FOR ALL TRANSPORTATION ACCIDENTS, CALL CHEMTREC®:	1-800-424-9300
FOR ALL MSDS QUESTIONS & REQUESTS, CALL MSDS CONTROL:	1-800-511-MSDS

PRODUCT NAME: HTH® SPA ALGAECIDE PDQ

SECTION 1 PRODUCT AND COMPANY IDENTIFICATION

REVISION DATE: 11-08-1999 SUPERCEDES: None
MSDS NO: 01924-0001 - 86201

MANUFACTURER: Arch Chemicals, Inc. 501 Merritt 7 PO Box 5204 Norwalk, CT 06856-5204

SYNONYMS: Poly(oxyethylene(dimethyliminio)ethylene-(dimethyliminio)-
ethylene dichloride) solution
CHEMICAL FAMILY: Quaternary Ammonium Salt
\$FORMULA: $(C_{16}H_{24}N_2OCl_2)_n$
USE DESCRIPTION: Spa Algaecide
OSHA HAZARD CLASSIFICATION: Eye and respiratory irritant

SECTION 2 COMPONENT DATA

PRODUCT COMPOSITION:

CAS or CHEMICAL NAME: Poly(oxyethylene(dimethyliminio)ethylene-
(dimethyliminio) ethylene dichloride)

CAS NUMBER: 31075-24-8

PERCENTAGE RANGE: 5-8%

HAZARDOUS PER 29 CFR 1910.1200: Yes

EXPOSURE STANDARDS: None Established

CAS or CHEMICAL NAME: Water

CAS NUMBER: 7732-18-5

PERCENTAGE RANGE: 92-95%

HAZARDOUS PER 29 CFR 1910.1200: No

EXPOSURE STANDARDS: None Established

SECTION 3 PRECAUTIONS FOR SAFE HANDLING AND STORAGE

DO NOT TAKE INTERNALLY. AVOID CONTACT WITH SKIN, EYES AND CLOTHING. UPON
CONTACT WITH SKIN OR EYES, WASH OFF WITH WATER. AVOID BREATHING MIST
OR VAPOR.

STORAGE CONDITIONS:

STORE IN A COOL, DRY, WELL VENTILATED PLACE.

OTHER: Keep from freezing.

PRODUCT STABILITY AND COMPATIBILITY

SHELF LIFE LIMITATIONS: No Data

INCOMPATIBLE MATERIALS FOR STORAGE OR TRANSPORT: None

SECTION 4 PHYSICAL DATA

APPEARANCE: Tan colored liquid
MELTING POINT: Not Applicable
BOILING POINT: >100 Deg.C (>212 Deg.F)
DECOMPOSITION TEMPERATURE: No Data
SPECIFIC GRAVITY: 1.0-1.2
BULK DENSITY: 1.0-1.2 (g/cc)
pH @ 25 DEG.C: 6.5-7.5
VAPOR PRESSURE @ 25 DEG.C: No Data
SOLUBILITY IN WATER: Completely miscible
VOLATILES, PERCENT BY VOLUME: 40-70
EVAPORATION RATE: No Data
VAPOR DENSITY: No Data
MOLECULAR WEIGHT: Not Applicable/Mixture
ODOR: Moderate
COEFFICIENT OF OIL/WATER DISTRIBUTION: No Data

SECTION 5 PERSONAL PROTECTIVE EQUIPMENT REQUIREMENTS

PERSONAL PROTECTION FOR ROUTINE USE OF PRODUCT:

RESPIRATORY PROTECTION: Respirator protection not normally needed.
If vapors, mists, or aerosols are generated,
wear a NIOSH approved respirator.

VENTILATION: Local exhaust ventilation is recommended if vapors, mists
or aerosols are generated. Otherwise, use general exhaust
ventilation.

SKIN AND EYE PROTECTIVE EQUIPMENT: Use chemical goggles and impermeable
gloves to avoid skin and eye contact.

EQUIPMENT SPECIFICATIONS: (when applicable):

RESPIRATOR TYPE: NIOSH approved dust/mist respirator
PROTECTIVE CLOTHING TYPE: (This includes: gloves, boots, apron,
protective suit): Nitrile butyl rubber

SECTION 6 FIRE AND EXPLOSION HAZARD INFORMATION

FLAMMABILITY DATA:

FLAMMABLE: No
COMBUSTIBLE: No
PYROPHORIC: No

FLASH POINT: Not flammable

AUTOIGNITION TEMPERATURE: Not Applicable

FLAMMABLE LIMITS AT NORMAL ATMOSPHERIC TEMPERATURE AND PRESSURE (PERCENT
VOLUME IN AIR): UEL - Not Applicable LEL - Not Applicable

NFPA RATINGS: Not Established

HMIS RATINGS:

Health: 1
Flammability: 1
Reactivity: 1
Personal Protection: B

EXTINGUISHING MEDIA:

Not Applicable-Choose extinguishing media suitable for surrounding
materials.

FIRE FIGHTING TECHNIQUES AND COMMENTS:

This product would not be expected to burn unless all the water is
boiled away. The remaining organic compounds may be ignitable.

Use water to cool containers exposed to fire.
See Section 11 for protective equipment for fire fighting.

SECTION 7 REACTIVITY INFORMATION

CONDITIONS UNDER WHICH THE PRODUCT MAY BE UNSTABLE

TEMPERATURES ABOVE: No Data
MECHANICAL SHOCK OR IMPACT: No
ELECTRICAL (STATIC) DISCHARGE: No
HAZARDOUS POLYMERIZATION: Will not occur
INCOMPATIBLE MATERIALS: Oxidizers, hypochlorites
HAZARDOUS DECOMPOSITION PRODUCTS: May include hydrogen chloride, carbon monoxide, carbon dioxide and oxides of nitrogen upon combustion

SUMMARY OF REACTIVITY:

OXIDIZER: No
PYROPHORIC: No
ORGANIC PEROXIDE: No
WATER REACTIVE: No

SECTION 8 FIRST AID

EYES: Immediately flush with large amounts of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Call a physician at once.

SKIN: Immediately flush with water. Washing any substance off the skin is a good safety practice.

INGESTION: Immediately drink water to dilute. Consult a physician.

INHALATION: If person experiences nausea, headache or dizziness, person should stop work immediately and move to fresh air until these symptoms disappear. If breathing is difficult, administer oxygen, keep the person warm and at rest. Call a physician. In the event that an individual inhales enough vapor to lose consciousness, person should be moved to fresh air at once and a physician should be called immediately. If breathing has stopped, artificial respiration should be given immediately. In all cases, ensure adequate ventilation and provide respiratory protection before the person returns to work.

SECTION 9 TOXICOLOGY AND HEALTH INFORMATION

ROUTES OF ABSORPTION

Inhalation, eye contact, ingestion

WARNING STATEMENTS AND WARNING PROPERTIES

DO NOT TAKE INTERNALLY. AVOID BREATHING MIST OR VAPORS. CAUSES MILD EYE IRRITATION. INHALATION OF MIST OR VAPORS MAY CAUSE MILD UPPER RESPIRATORY TRACT IRRITATION.

HUMAN DOSE RESPONSE DATA

ODOR THRESHOLD: No data
IRRITATION THRESHOLD: No data
IMMEDIATELY DANGEROUS TO LIFE OR HEALTH: No IDLH concentration has been established for this product.

SIGNS, SYMPTOMS, AND EFFECTS OF EXPOSURE:

INHALATION:
ACUTE:

Inhalation of mist or vapors of this product may cause mild irritation to the throat, mucous membranes and upper respiratory tract. Any irritation would be transient with no permanent damage expected.

CHRONIC:

There are no known or reported effects from chronic exposure except for effects similar to those experienced from single exposure.

SKIN:

No significant adverse effects to health would be expected to occur from dermal contact.

EYE:

Eye contact would be expected to cause mild irritation consisting of reversible redness, swelling, and mucous discharge to the conjunctiva. No corneal involvement or visual impairment would be expected to occur.

INGESTION:

ACUTE:

If ingested, gastrointestinal discomfort may occur with any or all of the following symptoms: nausea, vomiting, lethargy and diarrhea.

CHRONIC:

There are no known or reported effects from chronic exposure.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE:

There are no medical conditions known to be aggravated by exposure

INTERACTIONS WITH OTHER CHEMICALS WHICH ENHANCE TOXICITY:

There are no chemicals known to enhance the toxicity of the product.

ANIMAL TOXICOLOGY

ACUTE TOXICITY

INHALATION LC 50: > 26.4 mg/l, 1 hr. (rat)

DERMAL LD 50: > 2 g/kg. (rabbit)

ORAL LD 50: > 5.0 g/kg. (rat)

MILD EYE IRRITANT

NOT A SKIN IRRITANT

ACUTE TARGET ORGAN TOXICITY:

This product is irritating to the eyes. Upon inhalation of mists or vapors, may cause irritation to mucous membranes and upper respiratory tract.

This product has been tested as a solution containing 60% active ingredient (Poly(oxyethylene(dimethyliminio)ethylene-(dimethyliminio)ethylene dichloride) in a 21-day sub-acute dermal toxicity study using rabbits. No significant gross or histopathological effects were noted from dermal application of this chemical. It was also evaluated in laboratory animals and was found not to cause allergic skin sensitization.

CHRONIC TARGET ORGAN TOXICITY

There are no known or reported effects from repeated exposure to this product.

This product has been tested as a solution containing 60% active ingredient. No toxic effects occurred in a 90-day chronic feeding study conducted in rats.

REPRODUCTIVE AND DEVELOPMENTAL TOXICITY

There are no known or reported effects on reproductive function or fetal development from exposure to this product.

This product has been tested as a solution containing 60% active ingredient and was found to cause no teratogenic effects in rats.

CARCINOGENICITY:

This product is not known or reported to be carcinogenic by any reference source including IARC, OSHA, NTP, or EPA.

MUTAGENICITY:

This product is not known or reported to be mutagenic.

This product has been tested as a solution containing 60% active ingredient in an in vivo Micronucleus Assay in mice. It was negative at all dosage levels tested.

AQUATIC TOXICITY:

The following aquatic/wildlife toxicity data is available for this product when it was tested as a solution containing 60% active ingredient :

Rainbow trout, 96 hr. LC50: 0.43 mg/l
Bluegill sunfish, 96 hr. LC50: 0.45 mg/l
Daphnia magna, 48 hr. LC50: 0.162 mg/l
Bobwhite Quail, Oral LD50: 1 ml/kg.
Mallard Duck, Dietary LC50: > 20,000 ppm

SECTION 10 TRANSPORTATION INFORMATION

THIS MATERIAL IS NOT REGULATED AS A DOT HAZARDOUS MATERIAL.

SECTION 11 SPILL AND LEAKAGE PROCEDURES

FOR ALL TRANSPORTATION ACCIDENTS, CALL CHEMTREC AT 800-424-9300.

REPORTABLE QUANTITY: Not Applicable (Per 40 CFR 302.4)

SPILL MITIGATION PROCEDURES:

Evacuate all non-essential personnel. Hazardous concentrations in air may be found in local spill area. Stop source of spill as soon as possible and notify appropriate personnel.

AIR RELEASE: Vapors may be suppressed by the use of water fog. Contain all liquid for treatment and/or disposal as a (potential) hazardous waste.

WATER RELEASE: This material is heavier than and soluble in water. Notify all downstream users of possible contamination. Divert water flow around spill if possible and safe to do so.

LAND SPILL: Create a dike or trench to contain materials. Spill materials may be absorbed using saw dust, sand, clay soil, vermiculite or commercial absorbents. Do not place spill materials back in their original containers. Containerize and label all spill materials properly. Decontaminate all clothing and the spill area using detergent and flush with large amounts of water.

SPILL RESIDUES:

Dispose of per guidelines under Section 12, WASTE DISPOSAL.

PERSONAL PROTECTION FOR EMERGENCY SPILL AND FIRE-FIGHTING SITUATIONS:

No extra protection required beyond that listed in Section 5 (in case of fire, use normal fire fighting equipment, including self-contained

breathing apparatus: SCBA).

SECTION 12 WASTE DISPOSAL

If this product becomes a waste, it DOES NOT meet the criteria of a hazardous waste as defined under 40 CFR 261, in that it does not exhibit the characteristics of hazardous waste of Subpart C, nor is it listed as a hazardous waste under Subpart D.

As a nonhazardous liquid waste, it should be disposed of in accordance with local, state and federal regulations by treatment in a wastewater treatment system.

CARE MUST BE TAKEN TO PREVENT ENVIRONMENTAL CONTAMINATION FROM THE USE OF THIS MATERIAL. THE USER OF THIS MATERIAL HAS THE RESPONSIBILITY TO DISPOSE OF UNUSED MATERIAL, RESIDUES AND CONTAINERS IN COMPLIANCE WITH ALL RELEVANT LOCAL, STATE AND FEDERAL LAWS AND REGULATIONS REGARDING TREATMENT, STORAGE AND DISPOSAL FOR HAZARDOUS AND NONHAZARDOUS WASTES.

SECTION 13 ADDITIONAL REGULATORY STATUS INFORMATION

TOXIC SUBSTANCES CONTROL ACT:

This product is regulated under the Federal Insecticide, Fungicide and Rodenticide Act. A component of this product is not listed on the Toxic Substances Control Act inventory.

CALIFORNIA SAFE DRINKING WATER AND TOXIC ENFORCEMENT ACT OF 1986 -

PROPOSITION 65:

"WARNING: This product contains detectable amounts of a chemical(s) known to the State of California to cause cancer and/or birth defects or other reproductive harm."

SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT TITLE III:

HAZARD CATEGORIES, PER 40 CFR 370.2:

HEALTH: Immediate (Acute)

PHYSICAL: None

EMERGENCY PLANNING AND COMMUNITY RIGHT TO KNOW, PER 40 CFR 355, APP.A:

EXTREMELY HAZARDOUS SUBSTANCE - THRESHOLD PLANNING QUANTITY:

None Established

SUPPLIER NOTIFICATION REQUIREMENTS, PER 40 CFR 372.45:

None Established

SECTION 14 ADDITIONAL INFORMATION

MSDS REVISION STATUS: First issue

SECTION 15 MAJOR REFERENCES

References are available upon request.

THIS MATERIAL SAFETY DATA SHEET (MSDS) HAS BEEN PREPARED IN COMPLIANCE WITH THE FEDERAL OSHA HAZARD COMMUNICATION STANDARD, 29 CFR 1910.1200. THE INFORMATION IN THIS MSDS SHOULD BE PROVIDED TO ALL WHO WILL USE, HANDLE, STORE, TRANSPORT, OR OTHERWISE BE EXPOSED TO THIS PRODUCT. THIS INFORMATION HAS BEEN PREPARED FOR THE GUIDANCE OF PLANT ENGINEERING, OPERATIONS AND MANAGEMENT AND FOR PERSONS WORKING WITH OR HANDLING THIS PRODUCT. ARCH CHEMICALS BELIEVES THIS INFORMATION TO BE RELIABLE AND UP TO DATE AS OF THE DATE OF PUBLICATION BUT, MAKES NO WARRANTY THAT IT IS. ADDITIONALLY, IF THIS MSDS IS MORE THAN THREE YEARS OLD, YOU SHOULD CONTACT ARCH CHEMICALS MSDS CONTROL AT THE PHONE NUMBER ON THE FRONT PAGE TO MAKE CERTAIN THAT THIS DOCUMENT IS CURRENT.

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